

**PATENT COOPERATION TREATY**  
**PCT**

**INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY**  
 (Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference <b>A2003/02016</b>	FOR FURTHER ACTION	See Form PCT/IPEA/416
International application No. <b>PCT/AT2004/000430</b>	International filing date ( <i>day/month/year</i> ) <b>06.12.2004</b>	Priority date ( <i>day/month/year</i> ) <b>15.12.2003</b>
International Patent Classification (IPC) or national classification and IPC <b>B65G47/14, B65G47/30, B65G17/36, B65G15/58</b>		
Applicant <b>STIWA-FERTIGUNGSTECHNIK STICHT GESELLSCHAFT M.B.H.</b>		

1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of <b>11</b> sheets, including this cover sheet.
3. This report is also accompanied by ANNEXES, comprising: <ul style="list-style-type: none"> <li>a. <input type="checkbox"/> (<i>sent to the applicant and to the International Bureau</i>) a total of _____ sheets, as follows:           <ul style="list-style-type: none"> <li><input type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).</li> <li><input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.</li> </ul> </li> <li>b. <input type="checkbox"/> (<i>sent to the International Bureau only</i>) a total of (indicate type and number of electronic carrier(s)) _____, containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).</li> </ul>

4. This report contains indications relating to the following items:
<ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> Box No. I Basis of the report</li> <li><input type="checkbox"/> Box No. II Priority</li> <li><input type="checkbox"/> Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</li> <li><input checked="" type="checkbox"/> Box No. IV Lack of unity of invention</li> <li><input checked="" type="checkbox"/> Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</li> <li><input type="checkbox"/> Box No. VI Certain documents cited</li> <li><input type="checkbox"/> Box No. VII Certain defects in the international application</li> <li><input type="checkbox"/> Box No. VIII Certain observations on the international application</li> </ul>

Date of submission of the demand	Date of completion of this report
Name and mailing address of the IPEA/EP	Authorized officer
Facsimile No.	Telephone No.

## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.  
PCT/AT2004/000430

## Box No. I Basis of the report

1. With regard to the **language**, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.
 

This report is based on translations from the original language into the following language \_\_\_\_\_, which is the language of a translation furnished for the purposes of:
 
  - international search (Rule 12.3 and 23.1(b))
  - publication of the international application (Rule 12.4)
  - international preliminary examination (Rule 55.2 and/or 55.3)
2. With regard to the **elements** of the international application, this report is based on (*replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report*):
 

the international application as originally filed/furnished  
 the description:  
 pages 1-43 \_\_\_\_\_ as originally filed/furnished  
 pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_  
 pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_  
 the claims:  
 nos. 1-49 \_\_\_\_\_ as originally filed/furnished  
 nos.\* \_\_\_\_\_ as amended (together with any statement) under Article 19  
 nos.\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_  
 nos.\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_  
 the drawings:  
 sheets 1/15-15/15 \_\_\_\_\_ as originally filed/furnished  
 sheets\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_  
 sheets\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_  
 a sequence listing and/or any related table(s) – see Supplemental Box Relating to Sequence Listing.
3.  The amendments have resulted in the cancellation of:
 

the description, pages \_\_\_\_\_  
 the claims, nos. \_\_\_\_\_  
 the drawings, sheets/figs \_\_\_\_\_  
 the sequence listing (*specify*): \_\_\_\_\_  
 any table(s) related to sequence listing (*specify*): \_\_\_\_\_
4.  This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).
 

the description, pages \_\_\_\_\_  
 the claims, nos. \_\_\_\_\_  
 the drawings, sheets/figs \_\_\_\_\_  
 the sequence listing (*specify*): \_\_\_\_\_  
 any table(s) related to sequence listing (*specify*): \_\_\_\_\_

\* If item 4 applies, some or all of those sheets may be marked "superseded."

**INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY**International application No.  
PCT/AT2004/000430**Box No. IV      Lack of unity of invention**

1.  In response to the invitation to restrict or pay additional fees the applicant has:
  - restricted the claims.
  - paid additional fees.
  - paid additional fees under protest.
  - neither restricted the claims nor paid additional fees.
2.  This Authority found that the requirement of unity of invention is not complied with and chose, according to Rule 68.1, not to invite the applicant to restrict or pay additional fees.
3. This Authority considers that the requirement of unity of invention in accordance with Rules 13.1, 13.2 and 13.3 is:
  - complied with.
  - not complied with for the following reasons:  
  
**See Supplemental Box.**
4. Consequently, this report has been established in respect of the following parts of the international application:
  - all parts.
  - the parts relating to claims Nos. \_\_\_\_\_

## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.  
PCT/AT2004/000430

**Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

## 1. Statement

Novelty (N)	Claims	1–24, 26–30, 32–49	YES
	Claims	25, 31	NO
Inventive step (IS)	Claims	1–24, 26–30, 32–49	YES
	Claims	25, 31	NO
Industrial applicability (IA)	Claims	1–49	YES
	Claims		NO

## 2. Citations and explanations (Rule 70.7)

## 1. Reference is made to the following document:

D1: AT 363 384 B (KONE OSAKEYHTIOE)  
27 July 1981 (1981-07-27).

## 2. INDEPENDENT CLAIM 25

2.1 The present application fails to satisfy the requirements of PCT Article 33(1) because the subject matter of claim lacks novelty (PCT Article 33(2)). Document D1 discloses (the references in parentheses are to said document):

a device for conveying and separating elongate parts (12, 13), said device comprising a first conveying system (1) for an unsorted load of elongate parts and, downstream thereof in the direction of conveyance of the elongate parts, a first system (1) for separating the elongate parts (1) and, downstream thereof in the direction of conveyance of the elongate parts, a second separating system (2) for a part-load of optionally pre-sorted elongate parts as well as,

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downstream thereof in the direction of conveyance of the elongate parts, a first delivery system (16) for the separated elongate parts, each of said sorting systems (1, 2) having at least one continuously circulating transport element, the ratio between the number of elongate parts in the pick-up areas of the first and second separating systems (1, 2) being up to approximately 10:1 (figure 1).

## 3. DEPENDENT CLAIMS 26-31

3.1 The combination of features according to dependent claims 26-30 is not known from the available prior art, nor is it rendered obvious thereby.

3.2 Claim 31 contains no features which, combined with the features of any claim to which it refers, meets the PCT requirements for novelty and/or inventive step.

## 4. INDEPENDENT CLAIM 1

4.1 Document D1, considered to be the closest prior art, discloses (the references in brackets are to said document) a separating system for conveying and separating elongate parts (12, 13) from a part-load in a direction of conveyance that runs transversely relative to the longitudinal dimension of said parts, with a pick-up zone (1, 2) for a

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part-load of elongate parts and, thereover, a delivery zone (16) for elongate parts separated from the part-load, at least one continuously circulating, controllable transport element extending between the pick-up zone (1, 2) and the delivery zone (16), the transport element in the conveying system comprising entraining elements arranged in parallel one behind the other and running transversely relative to the direction of conveyance,

**from which the subject matter of claim 1 differs in that**, on the outer side of each entraining element and facing the pick-up zone, at least one grooved recess, which is approximately trapezoidal in cross section, extends in the longitudinal direction of the entraining element for optionally receiving elongate parts, the grooved recess being equal in length to at least twice the maximum length of the elongate part and being delimited by a groove base and guide surfaces that are inclined relative to each other, the planes of the two guide surfaces enclosing an angle of less than 90°.

The subject matter of claim 1 is therefore novel (PCT Article 33(2)).

- 4.2 The present invention can consequently be considered to address the problem of making rapid alignment of the elongate parts possible whilst the design of the conveying element is simple and cost-effective.

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4.3 The solution to the above problem, as proposed in claim 1 of the present application, involves an inventive step (PCT Article 33(3)). The reasons are the following:

the solution is not disclosed in D1 since said document does not disclose the use of entraining elements in the form of grooved recesses (with an approximately trapezoidal cross section) to receive the elongate parts.

4.4 None of the available prior art documents gives a person skilled in the art any cause to use entraining elements in the form of grooved recesses (with an approximately trapezoidal cross section) to receive the elongate parts.

## 5. DEPENDENT CLAIMS 2-24

5.1 Claims 2-24 are dependent on claim 1 and, in consequence, likewise satisfy the requirements of the PCT in respect of novelty and inventive step.

## 6. INDEPENDENT CLAIM 32

6.1 Document D1, considered to be the closest prior art, discloses (the references in brackets are to said document) a device for conveying, separating and aligning elongate parts (12, 13), said device

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comprising a first delivery system (14) for an unsorted load of elongate parts, a first separating system (1) downstream thereof in the direction of conveyance, for the unsorted elongate parts, and, downstream, optionally a second separating system (2) for a part-load of optionally previously separated elongate parts as well as, downstream of the second separating system in the direction of conveyance of the elongate parts, a first delivery system (16) for the elongate parts,

**from which the subject matter of claim 32 differs in that** the first delivery system is downstream, in the direction of conveyance of the elongate parts, of an alignment device for the elongate parts conveyed parallel to the direction of conveyance, said alignment device comprising a framework extending between an input zone adjacent to the first delivery system and an output zone opposite said input zone in the direction of conveyance with two mutually spaced, parallel, lateral framework parts that are perpendicular to the direction of conveyance, and also comprising at least one controllable conveying and alignment element mounted between the lateral frame parts, which element forms a shaft-like conveying channel with a cross section that decreases in size from the input zone towards the output zone, said channel being delimited by conveying surface

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sections that taper in the direction of a vertical central longitudinal plane of the conveying channel, said plane being parallel to the lateral framework parts and running therebetween.

The subject matter of claim 32 is therefore novel (PCT Article 33(2)).

- 6.2 The problem addressed by the present invention can consequently be regarded as that of making it possible to align the elongate parts correctly whilst the design of the device is simple and cost-effective.
- 6.3 The solution to the above problem, as proposed in claim 32 of the present application, involves an inventive step (PCT Article 33(3)). The reasons are as follows:
- the solution is not disclosed in D1 since said document contains nothing relating to the use of a shaft-like conveying channel (the cross section of which decreases in size from the input zone towards the output zone) for the alignment of elongate parts.
- 6.4 None of the available prior art documents gives a person skilled in the art any cause to use a shaft-like conveying channel for the alignment of elongate parts.

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## 7      DEPENDENT CLAIMS 33-49

7.1      Claims 33-49 are dependent on claim 32 and, in consequence, likewise satisfy the requirements of the PCT in respect of novelty and inventive step.

**Supplemental Box**

In case the space in any of the preceding boxes is not sufficient.

Continuation of: IV

1. The International Searching Authority has found that the international application contains multiple (groups of) inventions that are not linked by a common inventive concept (PCT Rule 13.1). The groups are as follows:

I. Claims 1-24: a separating device for conveying and separating elongate parts, comprising a conveyor element with entraining elements, each entraining element having an open grooved recess.

II. Claims 25-31: a separating device for conveying and separating elongate parts, comprising two separating systems, the ratio of the number of elongate parts in the pick-up area of the first separating system to that in the pick-up area of the second separating systems being up to approximately 10:1.

III. Claims 32-49: a device for conveying, separating and aligning elongate parts, comprising an alignment element which forms a shaft-like conveying channel.

The reasons are the following: the phrase "in particular according to one of claims..." is used in claims 25 and 32; consequent upon the use of this phrase, said claims are not dependent on claim 1.

## Supplemental Box

A comparison of the three groups of claims with document AT-B-408 730 (prior art) reveals that the following features make a contribution to the prior art and can therefore be regarded as special technical features (PCT Rule 13.2):

- claim 1: each entraining element has an open grooved recess, the cross section of which is approximately trapezoidal;
- claim 25: in the device, the ratio of the number of elongate parts in the pick-up area of the first separating system to that in the pick-up area of the second separating systems is up to approximately 10:1;
- claim 32: the alignment element forms a shaft-like conveying channel.

A comparison shows that **none** of the cited groups of claims have special technical features with characteristics in common with the special technical features of one of the other groups of claims and therefore, contrary to PCT Rule 13.2, said features are not the "same special technical features".